Subgroup on Innovation & Knowledge Exchange (SoIKE) 3rd meeting

Brussels
30 May 2023

Funded by the European Union

Thematic networks involving Operational Groups: OK-NET EcoFeed and BIOFRUITNET

Ambra De Simone
IFOAM Organics Europe

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Thematic Networks involving Operational Groups
Example of OK-NET-EcoFeed and BIOFRUITNET

Ambra De Simone, R&I project officer, IFOAM Organics Europe, 30/05/2023

IFOAM ORGANICS EUROPE

ONE VOICE FOR ORGANIC STAKEHOLDERS

IFOAM ORGANICS EUROPE
MAKING EUROPE MORE ORGANIC

Researchers | Certifiers | Input providers | Farmers | Processors | Traders / Distributors | Retailers

WHO WE REPRESENT

- IFOAM Organics Europe represents the entire organic food chain and beyond
- We count almost 200 members in 34 European countries
- Based on the IFOAM principles of organic agriculture:
  Health, Ecology, Fairness & Care

IFOAM ORGANICS EUROPE

RESEARCH AND INNOVATION UNIT

Knowledge for organics
Improving food and farming through research

Organic food and farming is knowledge intensive. As IFOAM Organics Europe:

- **We connect organic actors**
- **Promote knowledge exchange to continue improving organic practices so they fully achieve organic's principles.**
- **We care for participatory research and translate research outcomes into recommendations for policymakers and practitioners.**

R&I Projects

Coordination 1 project (2022-2026)

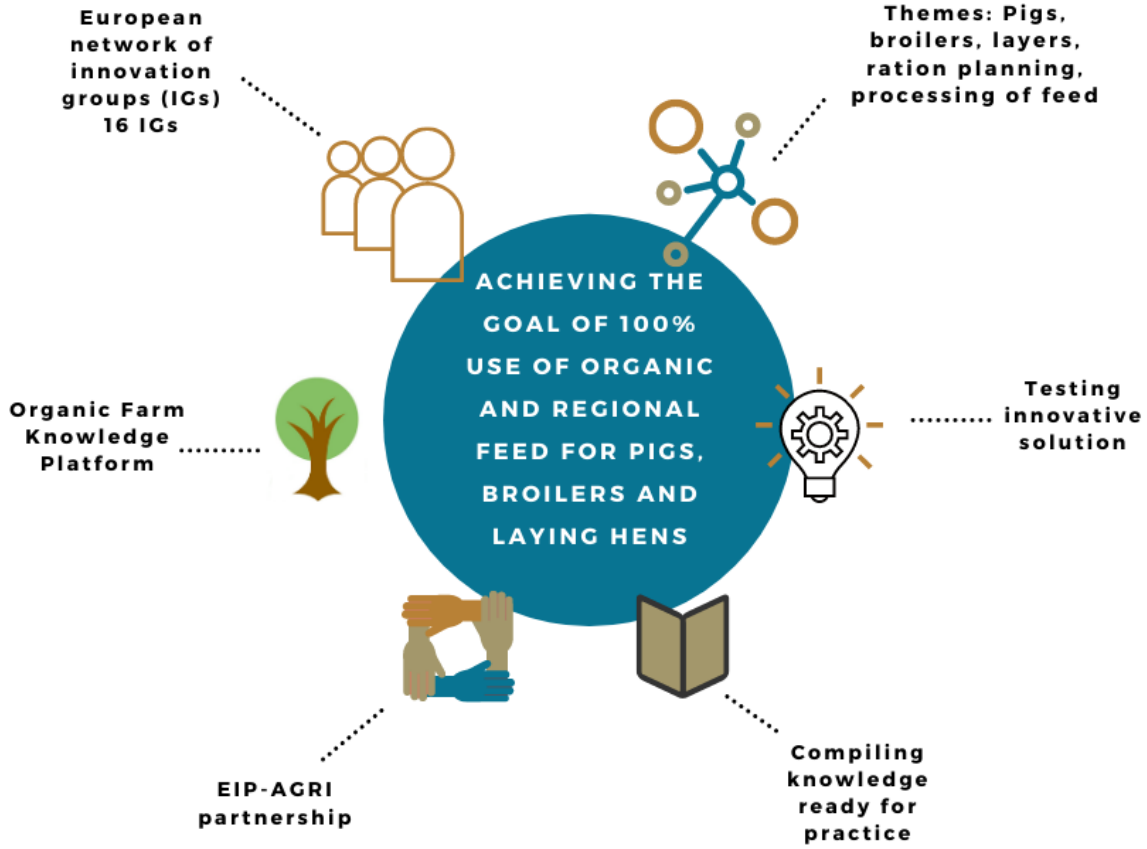
Coordinated 3 projects (2015-2021)
Partners in more than 10 running projects

Outline

- Thematic network OK-Net EcoFeed H2020 project
- Thematic network BIOFRUITNET H2020 project
- Organic Farm Knowledge platform

Organic Knowledge Network on Monogastric Animal Feed
(January 2018-March 2021)

- **Thematic Network** compiling knowledge ready for practice
- **Multi actor approach** throughout the project life cycle



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773911.

OK NET ecofeed

Example of testing: Foraging pigs, contribution of protein-rich fodder to finish pigs

On-farm trial of a system of outdoor fattening using various combinations of forage crops to reduce the amount of concentrate feed and improve the nutritional quality of the meat

- Farmer: Carl Shread
- Coordination: ITAB
- Technical expertise: Chamber of agriculture Pays de la Loire and Bio Direct

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Dissemination towards end users (farmers and advisers)

- Dissemination through project partners:
  - Organization of national innovation groups and European thematic groups meetings
  - Webinar on ration planning tools
  - News items and articles
  - Joint conference with other H2020 projects (PPILOW, FreeBirds and POWER)
- EIP-AGRI Network:
- All practice abstracts and videos developed
- 8 articles for EIP-AGRI newsletter
- Operational groups:
- Project outcomes disseminated at national/regional level towards Operational Groups focus on organics (Ecovalia, Spain; Bioland Germany)
- SLU and FiBL members of the EIP-AGRI focus Group “New feed for pigs and poultry”

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Thematic Network compiling knowledge ready for practice

Boosting Innovation in Organic Fruit production through strong knowledge networks

Objectives

- **Support the competitiveness of organic fruit growing in the EU and beyond**
- **Bridge the technical and knowledge gaps between science and practice**
- **Identify the best practices and foster their adoption among EU fruit growers**
- **Reinforce existing networks to ensure the flow of information for sharing knowledge on organic fruit production**

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Boosting Innovation in ORGANIC FRUIT production through stronger networks

Multi actor approach throughout the project life cycle

Stronger networks

Mapped 53 organic fruit growing networks in European and Mediterranean countries bringing together farmers, advisers, researchers, breeders, certifiers and marketing organizations with common technical areas of interest.

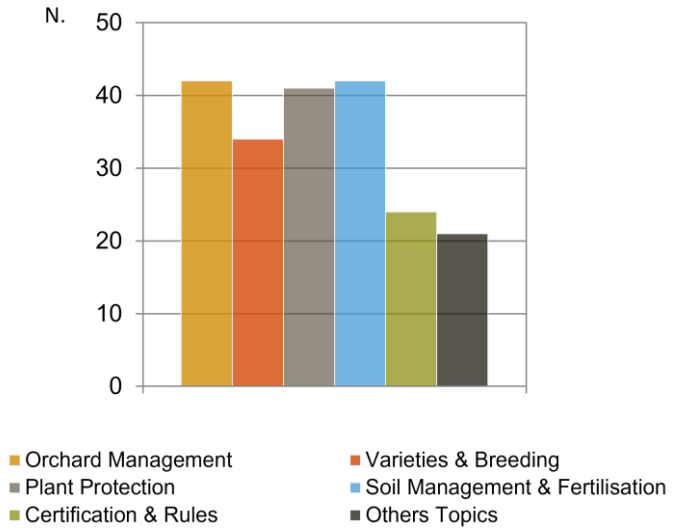
Critical needs and ready-for-practice solutions:

- Collected more than 300 materials ready-for-practice and 1200 scientific papers
- Survey with **250 fruits growers and advisors in 26 countries** to collect information about orchard management practices applied in pome, stone and citrus fruits (e.g., plant protection, soil fertilisation, biodiversity management, variety selection, etc) and the respective knowledge needs

Multi-Actor evaluation of the collected existing practical knowledge and gaps

Three “fruit panels”. Each included practitioners (including SMEs), advisors, and researchers and professionals coming from different parts of the organic fruit growing value chain

Technical areas of interest



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Innovative solutions for end users (farmers and advisers)

Compile, translate and disseminate the knowledge across Europe

100	Practice abstracts
33	Videos
5	Podcasts
3	E-learning
8	Field days

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Example of innovative solution in easy-to-read format for end users

Practice abstract based on the EIP-AGRI common format for practice abstract

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CIHEAM BARI

PRACTICE ABSTRACT

Vibrations to manipulate pest behaviours: new frontiers in pest control

Problem

Many insect pests do not (or partially) rely on odours for finding a mate, so pheromones and other chemical stimuli are ineffective for their management.

Solution

Vibrational signals (VS) play a crucial role in the mating of these species and can provide effective and sustainable control strategies to manipulate pest behaviours.

Benefits

The use of VS for pest control reduce pest populations, are safe (for humans and ecosystems) and are well-accepted by consumers.

Practical recommendation

- VS can be used to manipulate pest behaviours such as landing on the plant, mating, and feeding (Picture 1). Moreover, VS do not harm beneficial insects as they are tailored to a specific pest.
- VS mating disruption is a feasible control against grapevine leafhoppers, given that trellis systems are excellent for transmitting vibrations.
- VS can be applied within any crop by installing poles and wires connected to the VS exciter and a solar panel as an energy source (Picture 2).
- Novel VS pest control strategies for citrus groves are under development at CIHEAM Bari. VS are transmitted to plants by wires to reduce mating and settling of the whitefly pest *Alerocanthus spiniferus*.
- A VS trap is under development for monitoring the stinkbug *Halyomorpha halys* within economically important fruit groves (i.e., apple, pear and nut orchards). The device only needs to be placed in strategic spots in the field and will soon be available on the market.
- VS devices can be set up in the orchard either *de novo* or by adjusting the system according to farmers' needs.
- Vibrational devices will soon be integrated into the farmers' toolbox for pest control, providing sustainable control techniques compatible with other organic approaches (i.e., biocontrol agents). Indeed, farmers should stay tuned and keep in contact with VS pest control providers.

Applicability box

Theme
Crop production, environment and society

Context
Global, Mediterranean basin

Application time
During the cropping season but may depend on the species and scenario

Required time
From six months to one year

Period of impact
Less than one year

Equipment
Vibrational devices (i.e., piezo-buzzers, metal wires, exciters, trellis systems, etc.)

Best in
Cropping systems ravaged by pests communicating by means of vibrations (i.e., hemipterans but not exclusively)

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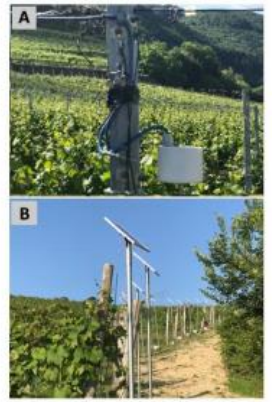
PRACTICE ABSTRACT



Picture 1: Vibrational approaches for pest management. A) VS to reduce pest landing and permanence on the plant; B) vibrational mating disruption; C) vibrational disruption of feeding behaviours. Credit: Sabina Avosani, CIHEAM Bari.

Picture 2: A) Device transmitting VS along the vibrational vineyard set in northern Italy to control grapevine leafhoppers; B) Solar panels providing energy to the vibrational devices. Credit: Fondazione Edmund Mach and Biogard® (Italy).

Further information

Further reading

- Polajnar, J., Eriksson, A., Lucchi, A., Anfora, G., Virant-Doberlet, M. and Mazzoni, V. (2015). Manipulating behaviour with substrate-borne vibrations – potential for insect pest control. Pest. Manag. Sci., 71: 15-23. https://doi.org/10.1002/ps.3848

Weblinks

- Check the Organic Farm Knowledge platform for more practical recommendations.
- Vibrational mating disruption for grape leafhoppers control. AGRO electronics.

About this practice abstract and CIHEAM Bari

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Project website: https://biofruitnet.eu

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Dissemination towards end users (farmers and advisers)

- ➢ Dissemination through project partners:
  - Organization of national events (e.g., National Agricultural Advisory Centre in Poland
  - e-learning course we organized in Spanish, Italian, French and German
  - Final technical conference
- ➢ EIP-AGRI/EU CAP Network:
- 100 practice abstracts in English, 130 practice abstracts translated in national languages and 25 videos
- Direct contact as key multiplier
- ➢ Operational groups:
- Project outcomes disseminated at national/regional level focus on organics (In France "Mediterranean Agroforestry Systems" and DEPASSE dealing with animals in orchards; Italian partner is the scientific responsible of OLTREBIO project

SAM SUD-PACA
Systèmes Agroforestiers Méditerranéens

DEPASSE
DÉveloppement des cultures Pérennes ASSociées à l'Élevage

Oltrebio
Rinnovare l'agricoltura

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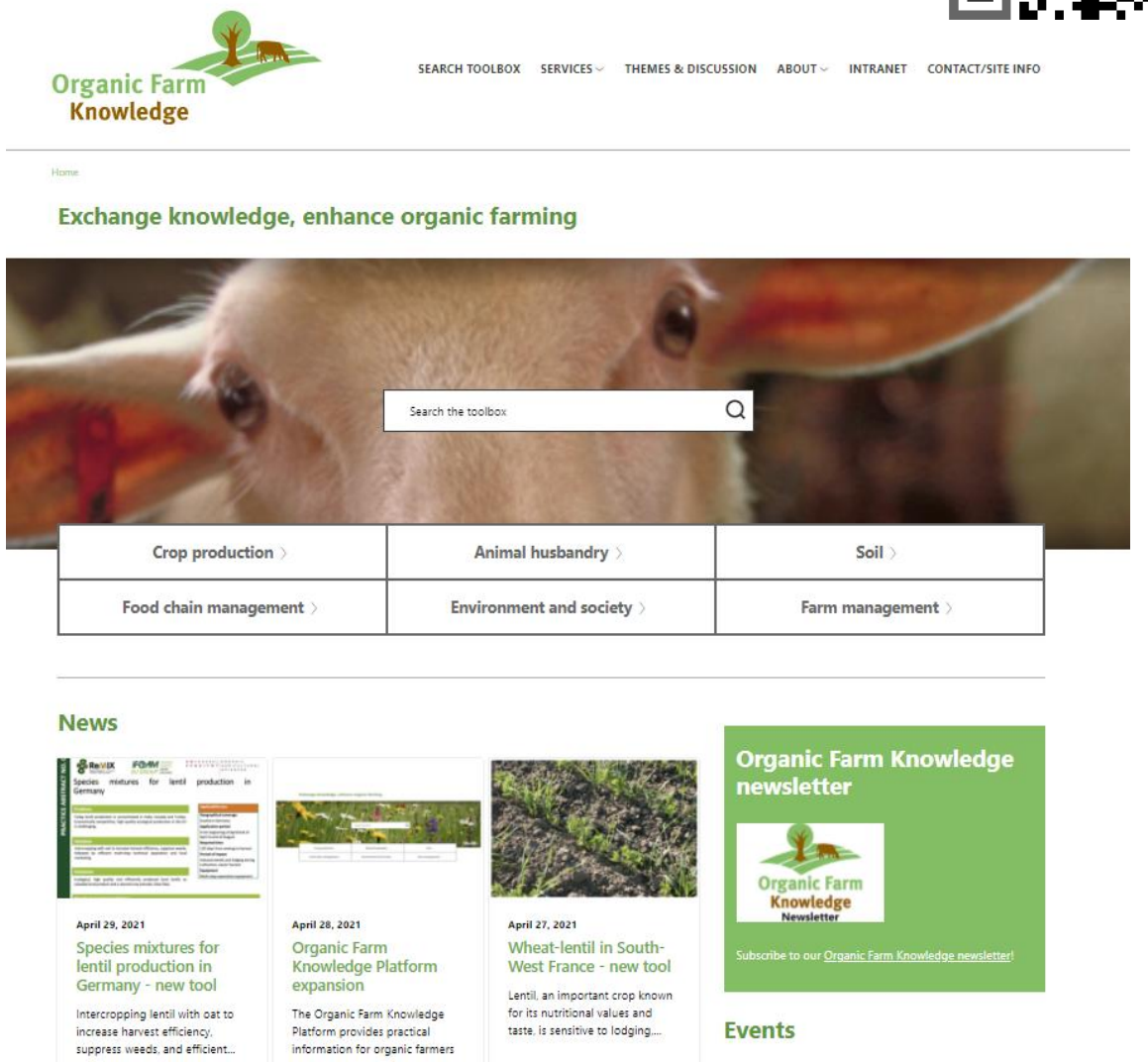
What is Organic Farm Knowledge?

- Built within the thematic network OK-Net Arable
- Further developed with OK-Net EcoFeed and BIOFRUTINET
- More than 20 H2020 and TNs projects feeding solutions for farmers and advisers
- Provides access to about 1000 tools and resources about organic farming
- A virtual meeting place for cross-border learning for farmers and farm advisors in Europe

Features

- Six themes
- Extended toolbox for searching tools
- News section linked to social media
- Calendar of key events
- Monthly newsletter
- A directory of national advisory services
- Discussion forum
- Translation into 13 European languages



Thank you!

Contact me: ambra.desimone@organicseurope.bio

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All results and presentations are available on the event webpage:

https://eu-cap-network.ec.europa.eu/events/subgroup-innovation-and-knowledge-exchange-soike-0